

BEFORE THE KANSAS DEPARTMENT OF HEALTH AND ENVIRONMENT

In the Matter of the Environmental
and Public Health Concerns at the
Boeing Military Airplane Company
Site and Surrounding Area

Case No. 87-E-12

ORDER

Now on this 16th day of April, 1987 the matter of the environmental and public health concerns at the Boeing Military Airplane Company Site and surrounding area comes before the Secretary of the Kansas Department of Health and Environment (KDHE) for continued review.

The Secretary, having been advised by staff and having reviewed the contents of the Administrative File, makes the following findings:

FINDINGS OF FACT AND CONCLUSIONS OF LAW

1. The Boeing Military Airplane Company, Division of the Boeing Company, (hereinafter "Boeing"), a Delaware corporation licensed to do business in this state, with its principal place of business in Kansas, is located in Wichita. The Boeing resident agent in Kansas is Mr. H.E. Williford, The Boeing Company, Administration Bldg. of Plant, Wichita, Kansas 67277-7730.
2. The Boeing Site is located in portions of Sections 11, 12, 13 and 14, Township 28 South, Range 1 East, Sedgwick County, Kansas. The precise location is set forth in the reports incorporated by reference in Paragraph 6 below.
3. On the 10th day of January 1986 the Secretary issued Administrative Order Case No. 86-E-3 to the Boeing. The findings of fact set forth in Case No. 86-E-3 are hereby incorporated by reference and made a part of this Order.

4. Boeing did not exercise its right of appeal for Administrative Order Case No. 86-E-3 as provided by K.S.A. 65-3440 and therefore it became final ten days from the date the Order was received by Boeing.
5. Boeing has submitted the necessary data, reports, implementation schedules and has complied with directions as ordered by Case No. 86-E-3.
6. In partial compliance with Administrative Order Case No. 86-E-3, Boeing submitted remedial investigation and feasibility study reports dated June 1986. The reports, entitled Remedial Investigation (Volumes I and II) and Feasibility Study, were prepared for Boeing by Midwest Analytical Laboratories and International Technology Incorporation. KDHE has reviewed these documents and, subsequent to consultations and correspondence with Boeing, has determined that containment, pumping, treatment and monitoring technologies are to be implemented in order to contain and clean up the groundwater contamination found beneath and adjacent to the Boeing Site.

In addition to the aforementioned reports, the following reports are hereby incorporated by reference and made part of this Order:

- a. Groundwater Investigation and Feasibility Study for Remedial Action at Boeing Military Airplane Company, Sedgwick County, Kansas, dated January 1986.
- b. Interim Remedial Action Plan for North Creek Area, Boeing Military Airplane Company, Wichita, Kansas, dated April 1986.
- c. Interim Report of the North Creek Remedial Action for Boeing Military Airplane Company, dated November 1986.
- d. Boeing Military Airplane Company, Specifications for Groundwater Remedial Action Improvements, dated November 1986.

7. Pursuant to K.S.A. 65-159, KDHE has the authority to order the owner of private property, wherein it has been determined a nuisance exists on said property, to remove the nuisance.
8. For purposes of KDHE's governing laws, "pollution" means: "(1) such contamination or other alteration of the physical, chemical or biological properties of any waters of the state as will or is likely to create a nuisance or render such waters harmful, detrimental or injurious to public health, safety or welfare, or to the plant, animal or aquatic life of the state or to other designated beneficial uses; or (2) such discharge as will or is likely to exceed state effluent standards predicted upon technologically based effluent limitations". K.S.A. 65-171d(c).
9. KDHE has determined that remediation of the groundwater contamination at the Boeing Site is necessary to protect the public health and safety or the environment. K.S.A. 65-3411; K.S.A. 65-3443; K.S.A. 65-3453.
10. KDHE has determined that Volatile Organic Chemicals (VOC's) which have been discharged, deposited, injected, dumped, spilled, leaked, or placed in such a manner so as it has entered or may enter the environment or be discharged into the waters of the state at the Boeing Site is a "solid waste" as defined by K.S.A. 65-3402(a) and a "hazardous waste" as defined by K.S.A. 65-3430(f).
11. So as to ensure remediation of the Boeing Site, KDHE has the authority under K.S.A. 65-159, 65-161 et seq., 65-171d, 65-171v, 65-3401 et seq., 65-3430 et seq., 65-3452 et seq., and applicable rules and regulations promulgated thereunder to order investigations, submission of plans and data, implementation of plans, evaluation of plans and data, and other necessary action relative to the protection of the soils and the waters of the state.
12. KDHE has determined that Boeing has discharged water and soil pollutants at the Boeing Site and pursuant to K.S.A. 65-171v, KDHE has determined

that the discharged material must be collected, retained or rendered innocuous pursuant to a plan submitted to KDHE for approval.

ORDER

Pursuant to K.S.A. 65-159, K.S.A. 65-161 et seq., K.S.A. 65-171d, K.S.A. 65-171v, K.S.A. 65-3401 et seq., K.S.A. 65-3430 et seq., K.S.A. 65-3452 et seq., and the applicable rules and regulations promulgated thereunder, Boeing is hereby ordered to do as follows and Boeing hereby acknowledges and agrees to comply as follows:

1. Implement the Alternative 1 remedial action of the June 1986 Feasibility Study which is to include: construction of 50+ extraction wells, a collection system, an air stripper system, and a disposal system. Boeing shall utilize measurements of drawdown in selected monitoring wells, production from extraction wells, and reduction in contaminant levels in the wells and stripper influent as criteria for KDHE to determine the effectiveness of the cleanup effort. These criteria are set forth in paragraph 7 below. Should it become apparent that there is contaminated water bypassing the collection system (in excess of the outlined criteria and time schedule), then Boeing shall construct additional extraction wells to further intercept, redirect, and treat groundwater contamination sufficient to meet the established criteria. Failure of this system to meet the criteria will necessitate the construction of the containment structures proposed in Alternative 2 and 3. Additional engineering design is to be submitted, within 60 days of KDHE notification, which is sufficient to adequately determine the appropriate location, specifications, and construction and implementation schedule for the containment structures identified in Alternative 2 and 3.
2. Prepare equipment specifications and design criteria for implementation of Alternative 1 remedial action. Further, Boeing shall select and contract with an appropriate engineering consultant which is licensed by the State of Kansas, in order to develop the appropriate design,

drawings, and equipment specifications. These drawings and specifications shall be submitted to KDHE for review and comment within 30 days of the date of this Order.

3. Initiate, upon completion of KDHE review, construction contracting procedures and solicit bids within 15 days of receipt of KDHE approval. Bid submissions shall be required to be returned no later than 15 days from the date of bid solicitation. Final selection of the construction contractor shall be completed and the contractor notified of the award within 30 days from the date of bid notification.
4. Commence construction of the remedial Alternative 1 including collection, treatment and monitoring system by May 1, 1987 with initial withdrawal wells and collection system to be operational by July 1, 1987. Subject to weather conditions, the water wells and collection system will commence use within 90 days of initiation of construction.
5. Initiate system startup in a phased approach as various components of the remedial collection and treatment system are completed. The initial Phase 2 water to enter the air stripping system shall be completed on or before August 1, 1987. All wells shall be functional by September 1, 1987.
6. Begin measurement of water levels, volatile organic compounds (VOC's) and hexavalent chromium in selected wells on a scheduled basis by May 1, 1987 to establish the baseline criteria necessary to evaluate success of the remedial alternative. Sampling still be conducted on a weekly basis for the first month. The average contaminant concentration value for each well during the first month of sampling shall be considered the baseline value for the particular contaminant for the particular well. A list of the designated wells to be sampled shall be submitted to KDHE within 30 days of the date of this Order for review and approval. Subsequent to the establishment of the baseline, sampling shall be conducted on a monthly basis. This sampling schedule may be modified subject to KDHE's review and approval.

7. Meet the following four cleanup criteria for the groundwater collection, withdrawal, treatment and monitoring system:

- a. Boeing shall demonstrate a reduction in off-site VOC's and heavy metal contaminants by 70% or more in all off-site wells, springs and surface drainages (South Lake, West Creek and North Creek) within 180 days of the completion of the last extraction well system.

The following criteria is anticipated for the off-site monitoring wells and discharge points after operation of the withdrawal system:

- (a) After one year - *80% or more reduction in total VOC's and heavy metals
- (b) After two years - *50 micrograms/liter total VOC's
*90% reduction in heavy metals
- (c) After three years - *10 micrograms/liter TCE
*20 micrograms/liter Total VOC
Drinking water standard for heavy metals

*Reduction from baseline discharge or sampling concentration established prior to withdrawal system start-up.

- b. Boeing shall demonstrate a decrease in contamination levels in selected on-site monitoring wells from a pre-start-up base concentration to meet the following anticipated schedule:

- (a) First year - 25% reduction
- (b) Second year - 40% reduction
- (c) Third year - 45% reduction
- (d) Fourth year - 50% reduction
- (e) *Continue cleanup until background or 10 micrograms/liter is obtained.

*Cleanup concentrations must meet existing state or federal cleanup standards that are used at the time the cleanup is completed.

- c. Boeing shall demonstrate a reduction in total VOC concentrations in the influent of the stripper tower(s) by amounts and dates as

addressed per groundwater cleanup in paragraph 7(b) above. Performance criteria for the air stripper shall be 95% removal of VOC.

- d. Boeing shall demonstrate and maintain significant drawdown in all site monitoring wells. Water wells may show seasonal variation but will remain below baselines established in paragraph 6. Failure to show and maintain measurable drawdowns in contaminated monitoring wells will require additional extraction wells to be constructed and pumped as directed by KDHE.

KDHE and Boeing will review the project after 90 days of operation, and if it is apparent that the withdrawal wells are ineffective in controlling the spread of contamination from the Boeing facility, KDHE shall direct Boeing to initiate additional steps as outlined in the Feasibility Study and identified in Alternative 2 and 3 as appropriate. The appropriate choice of Alternative 2 and 3 and the degree of implementation shall be based upon information and data gathered during the Phase II project. KDHE may consider and direct Boeing to initiate steps other than, or in addition to, those outlined in Alternative 2 and 3 as KDHE deems appropriate.

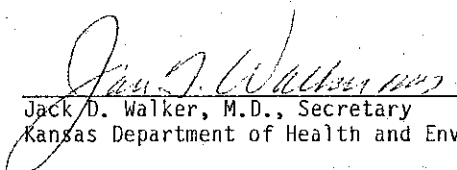
8. Submit to the KDHE, beginning July 1, 1987, a quarterly report which provides groundwater monitoring data, stripper daily flow rate data, stripper operating efficiency data and stripper influent/effluent concentration data. The report is to contain a potentiometric map, a total VOC contamination contour map and a chromium contamination contour map. The groundwater monitoring data is to include analytical results, static water level elevations and top of casing elevations. The report shall evaluate the groundwater monitoring program and the effectiveness of the containment and clean up program.
9. Submit to the KDHE, prior to March 1 of each year, an annual report which summarizes the quarterly reports, and details all improvements made to

the groundwater monitoring or containment and clean up program. The reporting period for the annual report shall be from January 1 to January 1 of the following year.

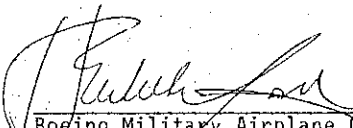
10. The requirements of this Order represent KDHE's best professional judgement at this time and are based upon available information. If circumstances change or if new data presents itself which indicates the threat of immediate or imminent danger to public health, the environment, or a different threat or pollution other than as is contemplated herein, KDHE retains the right to modify all dates and requirements or add additional requirements to this Order as it deems necessary. If any such modifications or additions constitute a significant change in the remedial plans or timetables contained in or required by this Order, then Boeing shall have the right to request an administrative hearing from such modifications or additions as provided by Kansas law.

11. By Boeing's representatives affixing their signature to this Order, Boeing agrees to waive all rights of appeal (except as provided for in Paragraph 10 above) and agrees to the terms, conditions, and requirements of this Order.

IT IS BY THE SECRETARY OF HEALTH AND ENVIRONMENT SO ORDERED THIS 16th DAY OF APRIL, 1987.

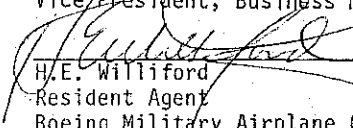


Jack D. Walker, M.D., Secretary
Kansas Department of Health and Environment



Boeing Military Airplane Company
H.E. Williford
Vice President, Business Management

Date: 4/6/87



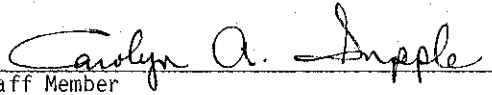
H.E. Williford
Resident Agent
Boeing Military Airplane Company

Date: 4/6/87

CERTIFICATION OF MAILING

I hereby certify that on this 16th day of April, 1987, a true and correct copy of the above and foregoing order was deposited in the U.S. Mail, certified, postage prepaid, return receipt requested, and addressed to:

1. Boeing Military Airplane Company Representative
P.O. Box 7730
Wichita, Kansas 67277
2. H.E. Williford
The Boeing Company
Administration Bldg. or Plant
Wichita, Kansas 67277-7730


Staff Member

P 128 654 839
Certified Mail No. : Boeing Military Airplane Company
Representative

P 128 654 840
Certified Mail No. : H.E. Williford
Resident Agent

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